

# TECHNICAL MEMORANDUM


## Utah Coal Regulatory Program

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March 21, 2007

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TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor 

FROM: Steve Fluke, Reclamation Hydrogeologist/Team Lead

RE: Permit Modification to Abandon Groundwater Monitoring Wells 89-18-1 and 89-20-1, Task ID #2688, Canyon Fuel Company, LLC, SUFCO Mine, C/041/0002

### SUMMARY:

This Technical Memo addresses the hydrologic aspects of the MRP modification submitted by Canyon Fuel Company, LLC, to remove two groundwater-monitoring wells (wells 89-19-1 and 89-20-1) from the SUFCO Mine operational water monitoring plan because the wells have been damaged. The modification was first submitted August 17, 2006 and was assigned Task ID #2605. The modification was found deficient by the Division and a letter was sent to the Permittee on October 18, 2007. Canyon Fuel's response to the deficiencies was received on November 6, 2006 and assigned Task ID #2688. The modification is titled for the abandonment of the groundwater monitoring wells, but only presents the removal of the wells from the monitoring plan. The wells are to be permanently sealed at a later date along with other damaged wells.

Hydrologic information provided in the permit modification meets the requirements of the Coal Mining Rules. The proposed amendment should be approved.

### TECHNICAL ANALYSIS:

## OPERATION PLAN

## HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

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**TECHNICAL MEMO**

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**Analysis:**

**Groundwater Monitoring**

Groundwater monitoring wells 89-18-1 and 89-20-2 have been damaged during the development of the gateroads for the Muddy Tract longwall panels. The wells can no longer be used and are being removed from the operational monitoring plan. In order to provide additional groundwater data and replace the damaged wells, attempts over two summers (2005 and 2006) to complete new wells have been made by Ark Coal within the Muddy Tract. However, due to difficult drilling conditions and despite several tries at great expense, the borings could not reach target depths and be completed as monitoring wells. At least one well was completed in the SITLA Muddy Tract (01-8-1), but it is uncertain whether any new wells will be completed in the Federal Muddy Tract.

The permit modification updates Table 7-2, Water Monitoring Program, and text in Section 7.3.1.2, Water Monitoring, to indicate that the two damaged wells are no longer part of the operational monitoring plan. The second submittal of the permit modification clarifies that historical monitoring wells have not been properly abandoned, but just removed. Section 7.3.1.2 has been updated to list all the historical wells and state that the wells will be permanently sealed during final reclamation in accordance with Sections 6.3.1 and 7.4.8 of the MRP.

**Transfer of Wells**

There are no plans for the transfer of groundwater monitoring wells in this permit modification. Prior to final bond release, all monitoring wells must be permanently sealed in accordance with R645-301-731.400.

**Findings:**

Hydrologic Information of the Operation Plan meets the requirements of the Coal Mining Rules.

**MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS**

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

**Analysis:**

**Monitoring and Sampling Location Maps**

Plate 7-3, Hydrologic Monitoring Stations, has been updated to show that wells 89-18-1 and 89-20-1 are historical monitoring stations.

**Findings:**

Maps Plans and Cross Sections information of the Operation Plan does meets the requirements of the Coal Mining Rules.

**RECOMMENDATIONS:**

Hydrologic information provided in the permit modification meets the requirements of the Coal Mining Rules. The proposed amendment should be approved at this time.